

Work Order ID 102749

June-12-13 9:13:19 AM

102749

Page 1

Item ID: D3137-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Guide

Start Date: 6/11/13

Start Qty: ~~16.00~~***16***

Cust Item ID:

Required Date: 6/11/13

Req'd Qty: ~~16.00~~***16***

Customer:

Reference:

Approvals:

Process Plan: MLSDate: 13-06-12 Tooling:

Date:

Run Start ***NR1***

QC:

Date: _____ SPC (Y/N):

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3137	Rev F								
100	BAND SAW	0.00	MH	B/07/08	9	Ø			
100			MH	B/07/11	7	Ø			
Bandsaw	Memo	0.00	MH	B/07/11	44	Ø			
Jeaspa Bandsaw	Cut Blanks. Blank size; 1.250" x .750" x .950" long								
110	HAAS CNC VERTICAL MACHINING #1	0.00							
110									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine as per Folio FA242 & Dwg D31372-Deburr								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.00							
Quality Control									

*b.a./DR. 13/07/14**b.a./D.E. 13/07/14*

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

<p>Work Order: _____</p> <p>Part No. _____</p> <p>NCR No. _____</p>	DISPOSITION <input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved	AGAINST DEPARTMENT/PROCESS <input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab	<input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite	<input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier	<input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other
---	--	---	--	--	--

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General									
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced						
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up						
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure						
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld						
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled						
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other						
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge							
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread								
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set								
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration								
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence								

Work Order ID 102749

June-12-13 9:13:19 AM

102749

Page 2

Item ID: D3137-3

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: Guide

Start Date: 6/11/13

Start Qty: 16.00

16

Cust Item ID:

Required Date: 6/11/13

Req'd Qty: 16.00

16

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:	Stop		*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC	QC8- Inspect parts - second check Memo	0.00	<i>6/13-07-14</i>			<i>60</i>	<i>0</i>		
Quality Control									

140 Identify as per dwg & Stock Location: *ST235A* 0.00
140
 Packaging
 Memo
 0.00

60x 7.10.13-07-15

150 QC21- Final Inspection - Work Order Release 0.00
150
 QC
 Quality Control
 Memo
 0.00

13/7/17 MF

13-7-15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____

Date: _____

Work Order update only

<p>Work Order: _____</p> <p>Part No. _____</p> <p>NCR No. _____</p>	DISPOSITION <input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved	AGAINST DEPARTMENT/PROCESS <input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab	<input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite	<input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier	<input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other
---	--	---	--	--	--

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General									
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced						
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up						
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure						
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld						
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled						
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other						
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/Surge							
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread								
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set								
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration								
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence								

Picklist Print

June-12-13 9:13:19 AM

Page 1

Work Order ID:	102749	Start Date:	6/11/13	Required Date:	6/11/13
Parent Item:	D3137-3	Start Qty:	16.00	Required Qty:	16.00
Parent Item Name:	Guide				
Comments:	IPP Rev:A02.05.29New IssueNG IPP Rev:B 08-05-23 revE as per dwg DD verified by:EC IPP Rev c 08.07.03 ECN1207 EC verified by DD				

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINB0.75X1.250 Delrin Bar		Purchased	No			100	f	1.0468	0.0791	1.3322112			

Location Loc Qty Loc Code

MAT018 1.046812

- 117985 1.0056

119133 0.008

120035 0.001476

123027 0.031736

MH 13/07/08

MH 13/07/11

MH 13/07/11

~~1.0056~~ 1.0056

(9)

.5818

(7)

3.6575 (44)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework	<input type="checkbox"/>	Skid-tube	<input type="checkbox"/>	Crosstube	<input type="checkbox"/>	Water Jet	<input type="checkbox"/>	Engineering
NCR No. _____	Scrap	<input type="checkbox"/>	Machining	<input type="checkbox"/>	Small Fab	<input type="checkbox"/>	Prod. Eng. Coor.	<input type="checkbox"/>	Quality
	Use-as-is	<input type="checkbox"/>	Thermoforming	<input type="checkbox"/>	Finishing	<input type="checkbox"/>	Rec/Store/Packaging	<input type="checkbox"/>	Other
	Suspected Unapproved	<input type="checkbox"/>	Large Fab	<input type="checkbox"/>	Composite	<input type="checkbox"/>	Supplier	<input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear	General									
Bending	<input type="checkbox"/>	Bend	<input type="checkbox"/>	Folio/Program	<input type="checkbox"/>	Outside Dimensions	<input type="checkbox"/>	Pressure/Forced		
Centre Not Concentric	<input type="checkbox"/>	BOM/Route	<input type="checkbox"/>	Grain	<input type="checkbox"/>	Over/Under tolerance	<input type="checkbox"/>	Set-up		
Cracks	<input type="checkbox"/>	Broken/Damage/Defect	<input type="checkbox"/>	Hardware	<input type="checkbox"/>	Part Incorrect	<input type="checkbox"/>	Temperature/Cure		
Crimp/Kink/Ripple/Wave	<input type="checkbox"/>	Burrs	<input type="checkbox"/>	Inspection Incomplete/Unqualified	<input type="checkbox"/>	Part Lost/Missing	<input type="checkbox"/>	Weld		
Cuffs	<input type="checkbox"/>	Contamination	<input type="checkbox"/>	Instructions Incomplete/Unclear	<input type="checkbox"/>	Part Moved	<input type="checkbox"/>	Wrong Stock Pulled		
Crushing	<input type="checkbox"/>	Countersink	<input type="checkbox"/>	Misaligned/off center	<input type="checkbox"/>	Positioned Wrong	<input type="checkbox"/>			
Heat Treat	<input type="checkbox"/>	Cut Too Short	<input type="checkbox"/>	Mislabeled	<input type="checkbox"/>	Power Loss/Surge	<input type="checkbox"/>	Other		
Inspection Strip in Tube	<input type="checkbox"/>	Drawing	<input type="checkbox"/>	Misread	<input type="checkbox"/>		<input type="checkbox"/>			
Marks/Chatter	<input type="checkbox"/>	Drill Holes	<input type="checkbox"/>	Off-set	<input type="checkbox"/>		<input type="checkbox"/>			
Turning Sequence	<input type="checkbox"/>	Finish	<input type="checkbox"/>	Out of Calibration	<input type="checkbox"/>		<input type="checkbox"/>			
Wave/Twist in Tube	<input type="checkbox"/>	Fit/Function	<input type="checkbox"/>	Out of Sequence	<input type="checkbox"/>		<input type="checkbox"/>			

DART AEROSPACE LTD	Work Order:	102749
Description: Guide	Part Number:	D3137-3
Inspection Dwg: D3137 Rev: F		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

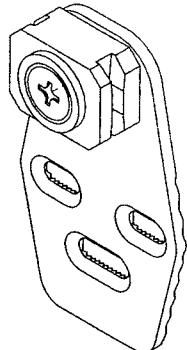
X First Article Prototype

Measured by:	D.P. / B.A
Date:	13/07/14

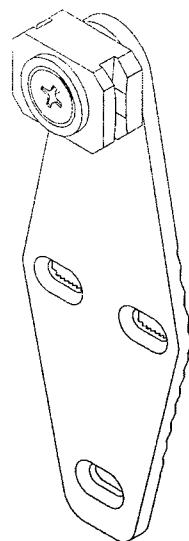
Audited by:	
Date:	13-07-14

Prototype Approval:	N/A
Date:	N/A

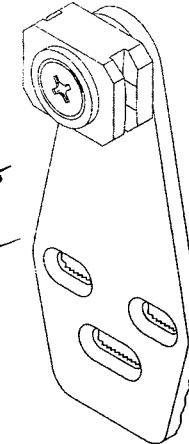
Rev	Date	Change	Revised by	Approved
A	03.11.27	New Issue	KJ/RF	
B	04.11.12	0.175 was 0.145 & Ø0.65 x 100° was Ø0.75 x 100°	KJ/JLM	
C	06.03.15	Dwg Rev updated	KJ/JLM	
D	08.12.02	Dwg Rev updated	KJ/DD	✓



D3137-041 BRACKET ASSEMBLY



D3137-043 BRACKET ASSEMBLY



D3137-045 BRACKET ASSEMBLY

102749 MLJ
13-06-12

RELEASED
06-06-2012

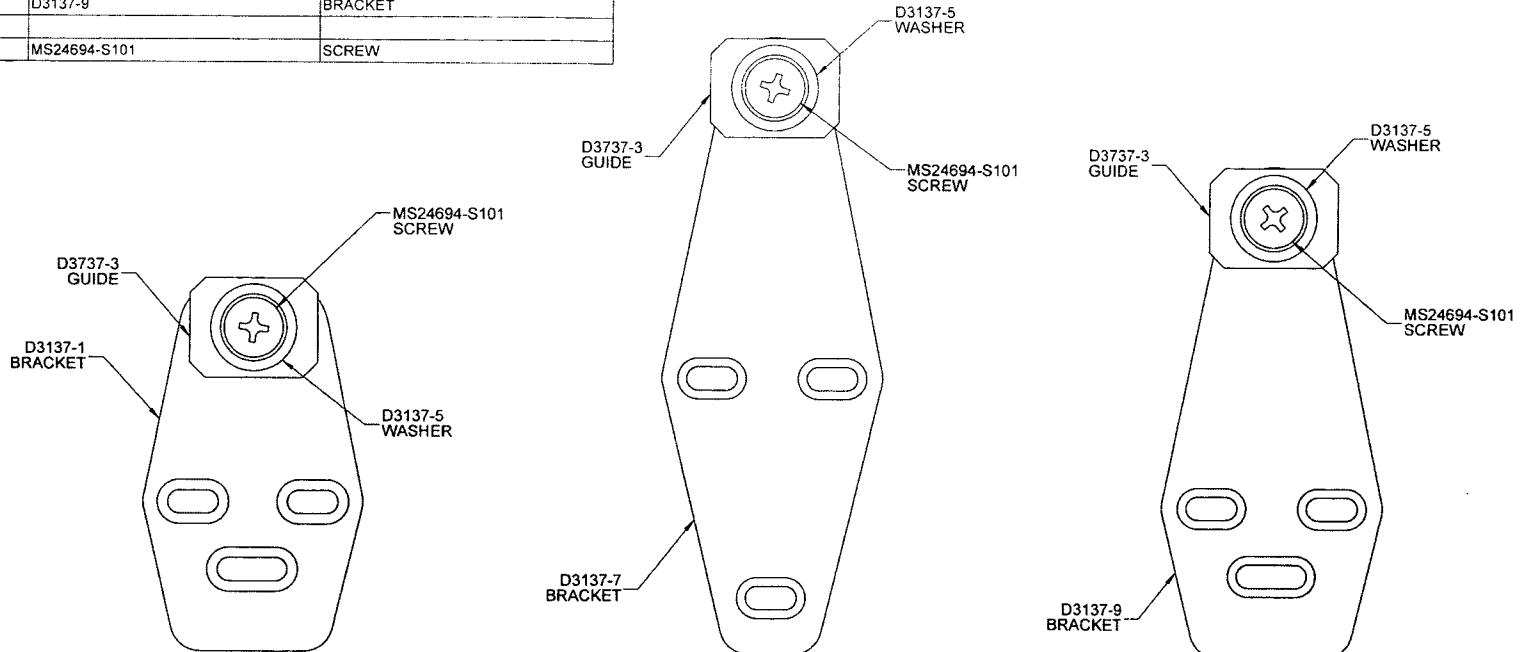
F	REDRAWN & REFORMATTED IN SOLIDWORKS. SHEET 3 ZONE A.5 DIM 2.35 WAS 2.48, ZONE 8.4 0.480 DIM WAS 0.605, ZONE A 8.67 DIM WAS 0.79, ZONE B 5.4.850 DIM WAS 4.975 & ZONE B8 5.29 DIM WAS 5.41. REASON: PART TRIMMED DUE TO INTERFERENCE WITH EXECUTIVE INTERIOR.	AJS	08.05.30
E	ADD -045	RF	05.11.23
D	RE-DESIGN D3137-5, CHANGE DIMS	DS	04.11.03
C	ADD -043	DS	03.08.15
B	ADD RIDGES; ADD MATERIAL PROP	DS	03.01.16
A	NEW ISSUE	DS	02.04.17
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	b	REV. F	
MFG. APPR.	<i>[Signature]</i>	DRAWING NO.	
APPROVED	<i>[Signature]</i>	D3137	SHEET 1 OF 5
DE APPR.	<i>[Signature]</i>	TITLE	SCALE
DATE	08.05.30	BRACKET ASSEMBLY	NTS

8 7 6 5 4 3 2 1

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102749

QTY. -041	QTY -043	QTY -045	PART NUMBER	DESCRIPTION
X			D3137-041	BRACKET ASSEMBLY
	X		D3137-043	BRACKET ASSEMBLY
		X	D3137-045	BRACKET ASSEMBLY
1			D3137-1	BRACKET
1	1	1	D3137-3	GUIDE
1	1	1	D3137-5	WASHER
	1		D3137-7	BRACKET
		1	D3137-9	BRACKET
1	1	1	MS24694-S101	SCREW

D3137-041 BRACKET ASSEMBLYD3137-043 BRACKET ASSEMBLYD3137-045 BRACKET ASSEMBLY

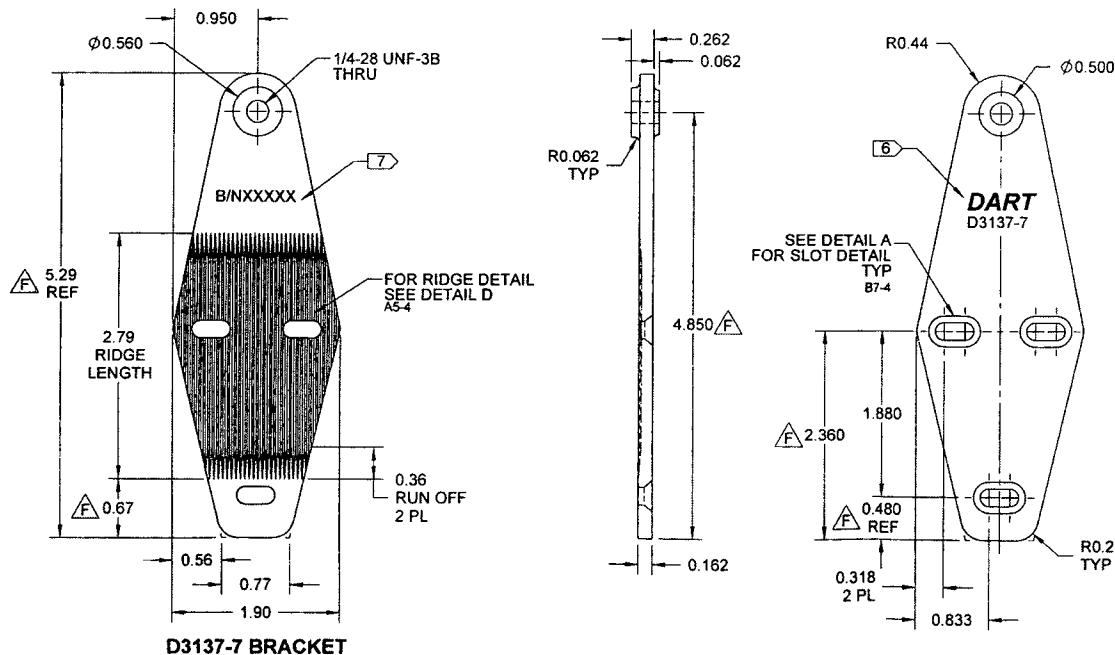
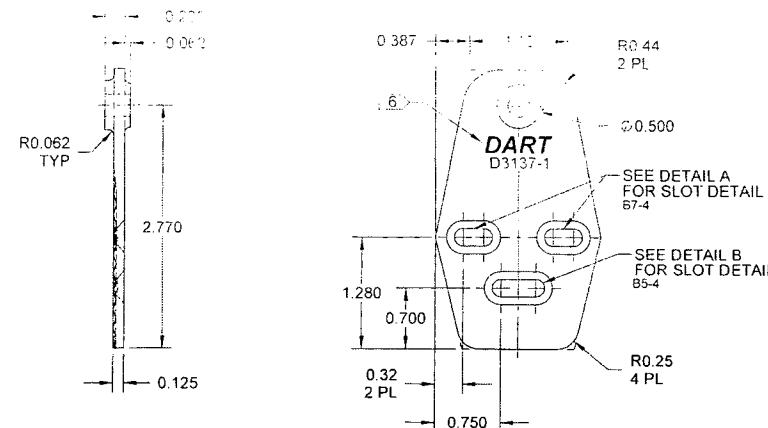
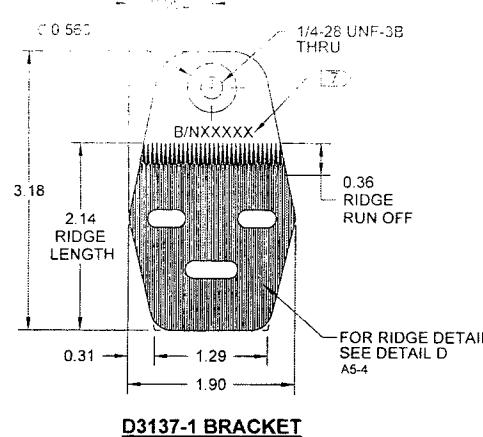
NOTES:
 1) MATERIAL: N/A
 2) FINISH: NONE
 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: N/A
 6) IDENTIFICATION: N/A
 7) WEIGHT: 0.18 lbs -041
 : 0.32 lbs -043
 : 0.27 lbs -045

RELEASED
08.06.26/00

DESIGN	DS	DART AEROSPACE LTD	
DRAWN	AIS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D3137	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		BRACKET ASSEMBLY	NTS
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8 7 6 5 4 3 2 1 A B C D A B C D E F G H I J K L

102749

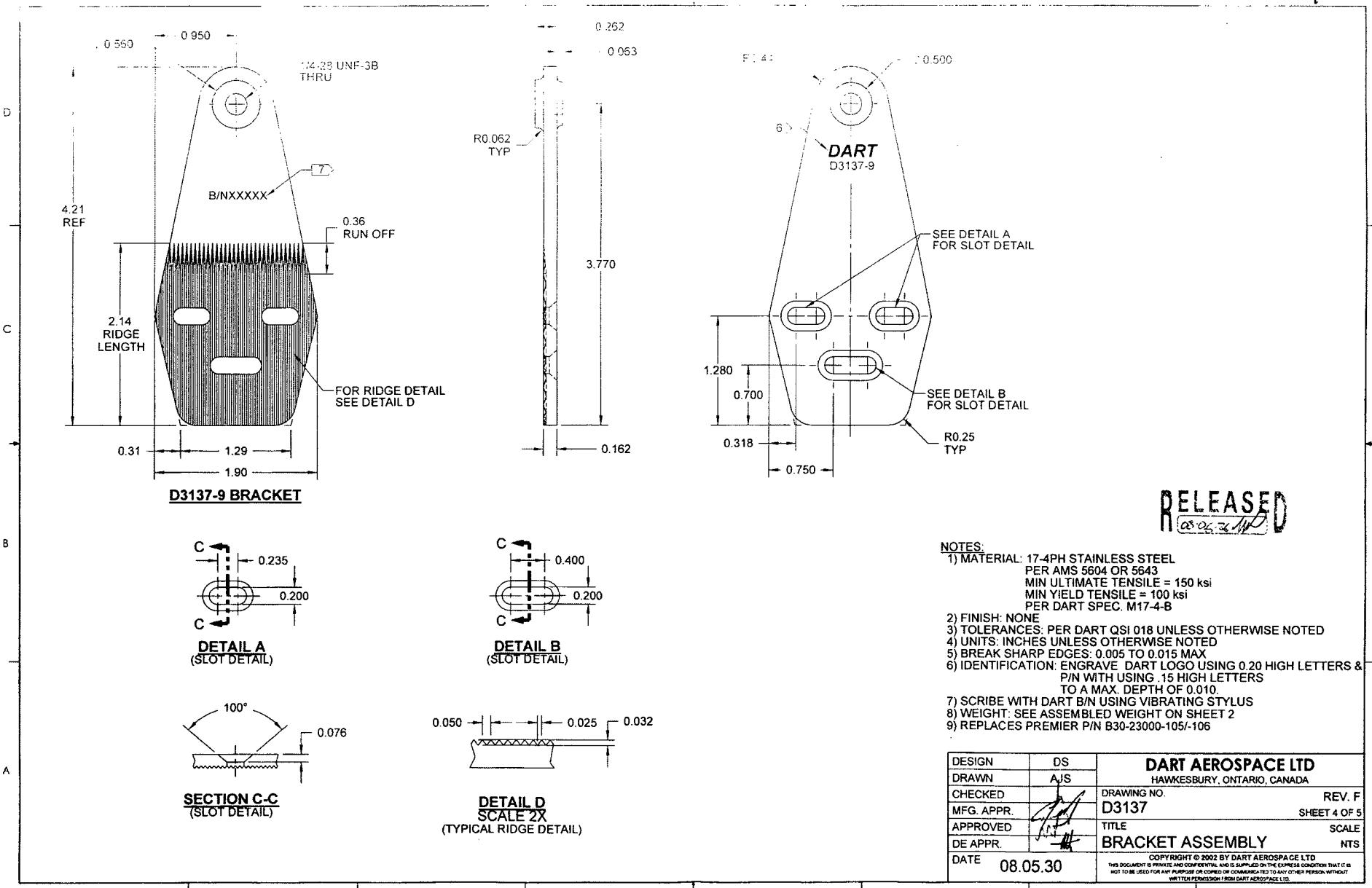
**NOTES:**

- 1) MATERIAL: -1 & -7
17-4PH STAINLESS STEEL
PER AMS 5604 OR 5643
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
PER DART SPEC. M17-4-B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: .005 TO 0.015 MAX
- 6) IDENTIFICATION: ENGRAVE DART LOGO USING 0.20 HIGH LETTERS &
P/N WITH USING .15 HIGH LETTERS
TO A MAX. DEPTH OF 0.010.
- 7) SCRIBE WITH DART B/N USING VIBRATING STYLUS
- 8) WEIGHT: SEE ASSEMBLED WEIGHT ON SHEET 2
- 9) -1 REPLACES PREMIER P/N B30-23000-105/16

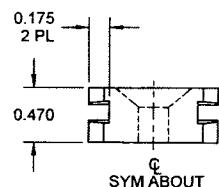
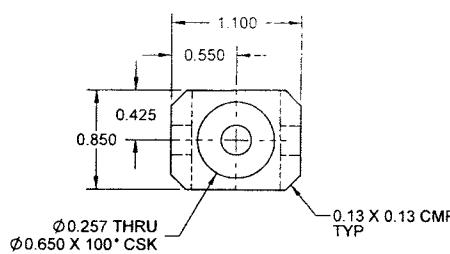
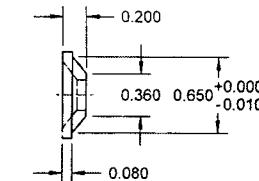
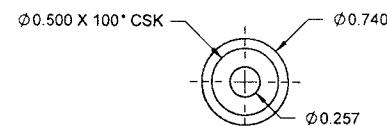
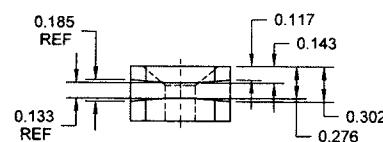
RELEASED
08-06-26 14:00

DESIGN	DS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SJ	DRAWING NO.	REV. F
MFG. APPR.		D3137	SHEET 3 OF 5
APPROVED	M	TITLE	SCALE
DE APPR.		BRACKET ASSEMBLY	NTS
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102749



102749

D3137-3 GUIDED3137-5 WASHERRELEASED
102749

NOTES:

- 1) MATERIAL: -3
DELRIN II 150E OR ACETRON GP ACETAL, BAR
(REF DART SPEC M-DELRIN-B)
-5
6061-T6 (OR 6061-T651/ T6510/ T6511/ T62) ALUMINUM BAR
PER-AMS-QQ-A-225/8 (OR AMS 4117/ 4128/ 4145/ 4116)
OR PER-QQ-A-200/8 (OR AMS 4160)
REF. DART SPEC M6061T6R
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 (-5 ONLY)
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: SEE ASSEMBLED WEIGHT ON SHEET 2
- 8) -3 REPLACES PREMIER P/N B30-2300-207
-5 REPLACES PREMIER P/N B30-2300-209

DESIGN	DS	DART AEROSPACE LTD	
DRAWN	JAS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JAS	DRAWING NO.	
MFG. APPR.	91	REV. F	D3137
APPROVED	100	SHEET 5 OF 5	TITLE
DE APPR.	100	SCALE	BRACKET ASSEMBLY
DATE	08.05.30	NTS	COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

8 1 7 6 5 4 3 2 1

A

B

D

C

B

A

1

